

Prepared:

January 10, 1986

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

DPM 5535-1

Form Approved  
OMB No. 44-R1387

AA9112

Z0004

# MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,  
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

## SECTION I

MANUFACTURER'S NAME Hysol Aerospace & Industrial Products Division The Dexter Corporation		EMERGENCY TELEPHONE NO. (415) 687-4201
ADDRESS (Number, Street, City, State, and Zip Code) 2850 Willow Pass Road, P.O. Box 312, Pittsburg, CA 94565		
CHEMICAL NAME AND SYNONYMS Epoxy Resin Adhesive		TRADE NAME AND SYNONYMS EA 956 Part A
CHEMICAL FAMILY Epoxy	FORMULA (Mixture)	

## SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)	
Triglycidyl p-Aminophenol			
Epoxy Resin (CAS#5026-74-4)	60	N.E.*	
Non-Hazardous Materials (Remainder)			
*N.E. = Not Established			

None of the ingredients contained in this product constitutes a hazardous ingredient as defined by Federal OSHA in 29CFR 1910 nor is any ingredient listed on any state's hazardous substances list except the epoxy resin listed.

The epoxy resin listed above may cause irritation and sensitization in susceptible individuals. It is not listed on the Cal/OSHA Director's List of Hazardous Substances nor is it listed as a carcinogen or potential carcinogen by Cal/OSHA, OSHA, IARC or NTP.

## SECTION III - PHYSICAL DATA

BOILING POINT (°F)	DEC 29 1986	DECOMPOSES	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	>1
VAPOR PRESSURE (mm Hg)	0.01mm		PERCENT VOLATILE BY VOLUME (%)	<0.01
VAPOR DENSITY (AIR=1)	Nil		EVAPORATION RATE (BU-AC. =1)	Nil
SOLUBILITY IN WATER	Nil			
APPEARANCE AND ODOR	Amber Liquid with Slight Odor.			

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	Over 300°F (est.)	FLAMMABLE LIMITS	Not measured	LeI	UeI
EXTINGUISHING MEDIA	Dry chemical or Halon fire extinguisher, or water spray, foam or fog.				
SPECIAL FIRE FIGHTING PROCEDURES	Use self-contained breathing apparatus when fighting fires in confined areas.				
UNUSUAL FIRE AND EXPLOSION HAZARDS	Dense smoke and toxic gasses may be liberated.				

## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Not established. See attached for additional health information.

EFFECTS OF OVEREXPOSURE  
May cause skin irritation and possible allergic reactions. Prolonged and repeated contact may cause sensitization which will result in allergic reactions.

EMERGENCY AND FIRST AID PROCEDURES  
Flush skin and eye contact with plenty of water. Wash skin thoroughly with soap and water, rubbing alcohol or hand cleaner. Do not use solvents. Remove soiled clothing and wash before reuse. If irritation persists or increases, see physician

## SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATIBILITY (Materials to avoid) Strong oxidizing agents, strong Lewis or mineral acids.

HAZARDOUS DECOMPOSITION PRODUCTS CO, NOx, aldehydes, acids and undetermined organics.

HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		Avoid mixing resin and curing agent in batches greater than one pound total.

Do not heat mixed adhesive above 75°F unless curing surfaces to be bonded. Otherwise, excessive heat build-up and the release of toxic gasses may occur.

## SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
Wear protective clothing, gloves and safety glasses. Cover with absorbent material; then Scrape up and transfer to metal container. Wipe up remaining residue with solvents, observing solvent flammability cautions, or use detergent.

WASTE DISPOSAL METHOD  
Dispose of as hazardous waste according to D.O.T. hazard class. If not regulated by D.O.T., dispose of as ORM-E. Disposal method can be land burial or chemical incineration as regulated by all governmental agencies.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) Not required with good industrial ventilation.

VENTILATION	LOCAL EXHAUST Recommended	SPECIAL
	MECHANICAL (General) Recommended	OTHER

PROTECTIVE GLOVES Impervious plastic or rubber EYE PROTECTION Safety glasses or goggles

OTHER PROTECTIVE EQUIPMENT As needed to protect skin and clothing

## SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep product cool in accordance with label instructions.

OTHER PRECAUTIONS Follow recommended curing schedule.

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January 10, 1986	Occupational Safety and Health Administration	AB9112
<h1 style="margin: 0;">MATERIAL SAFETY DATA SHEET</h1>		
2079C <i>JS</i>		
Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)		

SECTION I	
MANUFACTURER'S NAME Hysol Aerospace & Industrial Products Division The Dexter Corporation	EMERGENCY TELEPHONE NO. (415) 687-4201
ADDRESS (Number, Street, City, State, and Zip Code) 2850 Willow Pass Road, P.O. Box 312, Pittsburg, CA 94565	
CHEMICAL NAME AND SYNONYMS Two-Part Alkylamine Cured Epoxy Resin Adhesive	TRADE NAME AND SYNONYMS EA 956 Part B
CHEMICAL FAMILY Alkylamine	FORMULA (Mixture)

SECTION II - HAZARDOUS INGREDIENTS		
	%	TLV (Units)
Diethylenetriamine		
(CAS# 111400)	<13	1ppm(s)
Non-Hazardous Materials	(Remainder)	
<p>None of the ingredients contained in this product constitutes a hazardous ingredient as defined by Federal OSHA in 29CFR 1910 nor is any ingredient listed on any state's hazardous substances list except Diethylenetriamine.</p> <p>Diethylenetriamine is on the California Director's List of Hazardous Substances but is not a carcinogen or potential carcinogen per OSHA, Cal/OSHA, IARC or NTP. The TLV given is from OSHA and ACGIH.</p>		

SECTION III - PHYSICAL DATA			
BOILING POINT (°F.)	405°F	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	0.951
VAPOR PRESSURE (mm Hg.)	0.37mm	PERCENT, VOLATILE BY VOLUME (%)	Low
VAPOR DENSITY (AIR=1)	3.48	EVAPORATION RATE (BU. AC. = 1)	Low
SOLUBILITY IN WATER	100%	Note: Above data for Diethylenetriamine Only!	
APPEARANCE AND ODOR Amber Liquid with Ammoniacal Odor.			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used) Over 300°F (est.)	FLAMMABLE LIMITS Not measured	LeI	UeI
EXTINGUISHING MEDIA Dry chemical or Halon fire extinguisher, or water spray, foam or fog.			
SPECIAL FIRE FIGHTING PROCEDURES			
Use self-contained breathing apparatus when fighting fires in confined areas.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			
Dense smoke and toxic gasses may be liberated.			

## SECTION V - HEALTH HAZARD DATA

Corrosive to skin and eyes. Can cause chemical burns to skin and severe chemical burns to eyes. Vapors irritating and may cause chest discomfort and bronchitis symptoms. Moderately toxic by ingestion. Give water or milk if swallowed, do not induce vomiting. Get medical help.  
 Skin contact - flush with water. Then wash thoroughly with soap and water.  
 Eye contact - flush with water immediately 15 minutes and get medical help.

Please see attached sheet for additional health information.

## SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) Strong oxidizing agents, strong Lewis or mineral acids.			
HAZARDOUS DECOMPOSITION PRODUCTS CO, NOx, aldehydes, acids and undetermined organics.			
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		Avoid mixing resin and curing agent in batches greater than one pound total. Do not heat mixed adhesive above 75°F unless curing surfaces to be bonded. Failure to observe cautions may result in excessive heat build-up with the release of toxic gasses

## SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Wear protective clothing, gloves and safety glasses. Cover with absorbent material; then Scrape up and transfer to metal container. Wipe up remaining residue with solvents, observing solvent flammability cautions, or use detergent.	
WASTE DISPOSAL METHOD	
Dispose of as hazardous waste according to D.O.T. hazard class. If not regulated by D.O.T., dispose of as ORM-E. Disposal method can be land burial or chemical incineration as regulated by all governmental agencies.	

## SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) Not required with good industrial ventilation.		
VENTILATION	LOCAL EXHAUST Recommended	SPECIAL
	MECHANICAL (General) Recommended	OTHER
PROTECTIVE GLOVES Impervious plastic or rubber		EYE PROTECTION Safety glasses or goggles
OTHER PROTECTIVE EQUIPMENT As needed to protect skin and clothing		

## SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Keep product cool in accordance with label instructions.	
OTHER PRECAUTIONS Follow recommended curing schedule.	

HEALTH EFFECTS AND SAFE HANDLING OF  
HYSOL TWO PART ALKYLAMINE CURED EPOXY RESIN SYSTEMS

EA 956 Parts A & B

Epoxy Resin (Part A)

The ingredients in this product are of low toxicity by ingestion. However, it is very important to avoid all skin contact. Prolonged or repeated skin contact will cause irritation and will also cause sensitization and other adverse health effects in susceptible persons. Eye contact will cause eye irritation. Inhalation studies of this product are limited because there is an insignificant level of vapors given off. Inhalation of dust from sanding or grinding the cured adhesive can lead to exposure and possible health effects due to irritation from the particulates. If dust is generated, the use of local exhaust ventilation or an approved dust mask is required. Users of this product must protect their hands with latex or rubber gloves, their eyes with suitable eye protection, and their clothing with aprons or coveralls. Wash with soap and water before breaks, lunch, and at the end of work. Do not take soiled clothing home.

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Emergency and First Aid Procedures

- Eyes: Wash eyes promptly with plenty of water for at least 15 minutes.
- Skin: Remove excessively contaminated clothing and wash contaminated areas of the skin with soap and water or waterless skin cleanser.
- Inhalation: Vapors from this material should not represent a problem.
- Ingestion: This should not represent a problem. However, if swallowed, induce vomiting if patient is conscious.

Alklamine Curing Agent (Part B)

The curing agent used in this product is a caustic alkaline material that should be treated as a corrosive. This curing agent is relatively non-toxic by ingestion. Skin or eye contact may cause moderate irritation or burns. Repeated skin contact may also cause sensitization in susceptible persons. This product produces very little vapor under normal circumstances. However, when used at elevated temperatures or in confined areas, inhalation of vapors may cause throat irritation. High concentrations of vapors will result in respiratory irritation, cough, nausea and vomiting. There are no reported chronic toxicity effects from exposure to the ingredients in this product, but repeated or prolonged skin contact will cause skin rashes and chemical burns. Users of this product must protect their hands with latex or rubber gloves and their eyes with suitable eye protection.

Emergency and First Aid Procedures

Eyes: If even small amounts of this product enter the eyes, they should be irrigated immediately with large amounts of water for a minimum of 15 minutes. Seek medical attention to assess the nature and extent of the injury.

Skin: Wash skin contact immediately and copious amounts of soap and water. If extensive skin contact has occurred, use an emergency shower to flush skin with large amounts of running water together with soap and water washing for at least 15 minutes. Remove all contaminated clothing and shoes.

Inhalation: Remove patient to an uncontaminated atmosphere and seek medical attention.

Ingestion: Immediately drink large amounts of water or milk. Seek medical attention immediately.